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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,756

01/24/2006

Hans-Joachim Beyer

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BARNES & THORNBURG LLP  
750-17TH STREET NW  
SUITE 900  
WASHINGTON, DC 20006-4675

EXAMINER

COOLEY, CHARLES E

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

01/23/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/565,756

Applicant(s)

BEYER, HANS-JOACHIM

Examiner

Charles E. Cooley

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-13 and 15-21 is/are rejected.
- 7) ☒ Claim(s) 9, 10 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20060628.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **NON-FINAL OFFICE ACTION**

1. **This application has been reassigned to Technology Center 1700, Art Unit 1797 and the following will apply for this application:**

Please direct all written correspondence with the correct application serial number for this application to **Art Unit 1797**.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimiles should be transmitted to the centralized fax receiving number 571-273-8300.

### ***Priority***

2. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d). All of the CERTIFIED copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

### ***Information Disclosure Statement***

3. Note the attached PTO-1449 form submitted with the Information Disclosure Statement filed 28 JUN 2006.

### ***Drawings***

4. Applicant should verify that (1) all reference characters in the drawings are described in the detailed description portion of the specification and (2) all reference characters mentioned in the specification are included in the appropriate drawing Figure(s) as required by 37 CFR 1.84(p)(5).

5. The drawings are objected to because suitable descriptive and concise legends should be provided to label the depicted elements of the invention such as the motor 24, electromagnetic drive 25a-f, and coils/magnets 26 for understanding of the drawings (37 CFR 1.84(o)).

#### **INFORMATION ON HOW TO EFFECT DRAWING CHANGES**

##### **Replacement Drawing Sheets**

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" (37 CFR 1.121(d)) and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

##### **Annotated Drawing Sheets**

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

### **Timing of Corrections**

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

### ***Specification***

6. The substitute specification filed 24 JAN 2006 is approved and has been entered.
7. The substitute abstract is acceptable.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-8, 11-13, 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruning et al. (US 4,299,353) in view of DE 3325566 A1.**

Bruning et al. '353 discloses a full-jacket helical conveyor centrifuge, comprising:  
a rotatably disposed metallic drum 5 having a horizontal axis rotation; a helical conveyor 12 rotatably disposed at a different rotational speed with respect to a rotational speed of

the drum; gearing 1 and 6 and drives 2 and 15 for rotating the drum and conveyor; one drive device for the drum includes at least one electronic direct drive 2 and is arranged on an attachment 4 of the drum as an axial extension of the drum; a ratio between an inner axial dimension of the drum 5 and its inside diameter is greater than 1 and the ratio is greater than 2.5 as seen in the Figures; at least one cylindrical attachment 13 is arranged in an axial direction between main bearings seen in Fig. 1; the drive devices 2 and 15 being constructed independently of each other – Fig. 1; a rotational speed of one or more of the drum and the helical conveyor can be adjusted continuously via controller 16.

Bruning '353 does not disclose the recited electromechanical drive. DE 3325566 A1 discloses an electromechanical gearless drive for a centrifuge including either elements 15 arranged either directly at or on the drum 2 or arranged at or on a part non-rotatably connected with the drum, and also includes corresponding elements 14 arranged at a distance with respect to and without contact with the elements 15 respectively, as well as being arranged outside the drum or the part non-rotatably connected with the drum; and a propulsion force is generated in a gearless manner by an electromagnetic field of traveling waves advancing around the drum or around the part non-rotatably connected with the drum 2; wherein the elements 15 of the at least one electromechanical direct drive are arranged on an outer periphery of the drum or on an outer periphery of a part 8 or 10 non-rotatably connected with the drum, and the elements 14 are arranged radially outside the secondary elements at a distance from the secondary elements and without contact; one or more of the elements 14 or 15

surround the drum completely or in sections concentrically and are used for generating the field of traveling waves; the elements 15 are arranged on a ring disk projecting radially from the drum or on a part 8 or 10 non-rotatably connected with the drum 2; the elements 14 surround the drum in sections and the elements 15 surround the drum completely; the elements 14 include a plurality of successively controllable coils 14 distributed on an outer periphery of the drum for generating the field of traveling waves which travel around the drum and take along a plurality of the elements 15; the drum includes at least one play-free bearing 21 or 22 around which or directly adjacent to which at least one electromagnetic direct drive 14 is arranged; the elements 15 are permanently magnetic.

It would have been obvious and mere common sense to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted one or more of the drives in Bruning et al. '353 with an electromagnetic gearless drive as taught by DE 3325566 for the purposes of eliminating gearboxes, to render the drive system for the system more compact, and to eliminate the need for coupling shafts prone to breakage (per the abstract).

***Allowable Subject Matter***

10. Claims 9, 10, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach or fairly suggest the at least one cylindrical attachment being arranged on an outer periphery of a conical section of the drum; the at least one cylindrical attachment being a chamber for receiving a centripetal pump, or the centrifuge further including a motor generating an additional co-rotating field of traveling waves generates the different rotational speeds between the helical conveyor and the drum.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley in Art Unit 1797 whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CEC/  
Charles E. Cooley  
Examiner  
Art Unit 1797

21 January 2008